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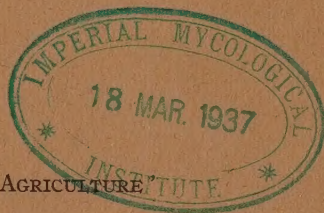
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INTERNATIONAL BULLETIN OF PLANT PROTECTION

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No. 3

DISCOVERIES AND CURRENT EVENTS *

Eritrea: Locusts †

During the month of December, 1936 no locusts have been reported in the Colony.

Libia: Entomological Records §

In the neighbourhood of Benghazi and Barce (El Merg), the presence of *Barytychius hordei* Br. was known, and was observed at the beginning of spring on *Hordeum murinum*, but was never before seen on cereals. However, in mid-April 1936, this beetle caused serious damage to wheat fields in the Barce plain, and it is feared that in time it will establish itself on wheat so firmly as to constitute a grave menace to the wheat areas of Libia.

The ears of wheat, not yet ripe, attacked by *B. hordei*, were already, in mid-April, of a light straw colour, and each grain of these dried ears contained a white larva, which after having accomplished its life cycle, left the grain now completely empty and fell to the ground; these larvae at once buried themselves with surprising rapidity in the soil to a depth of over 10 cm. and remained there in a state of repose for several months, enclosed in a cocoon of compressed earth, before changing into the pupa. At the end of January, 1937, in the laboratory, the beetle was already completely developed without, however, having left its cocoon of earth.

Pituranthos tortilis, a plant greatly diffused in East Libia, is a host plant for a scale insect (*Leucaspis* sp.), which in its turn serves as host (in the proportion of 99 per cent.) for an endophage of the genus *Aphycus* (Masi det.), resembling the European species *A. hederaceus*, Westw., and also the two American species *A. flavus*, Horw. and *A. luteolus*, Timb. The genus *Aphycus* comprises some species very active in the control of various scale insects; it would be, therefore, of considerable value to propagate these species.

During the spring of 1936, and up to the end of the month of June, the flowers of *Capparis spinosa* var. *rupestris*, a plant found growing on the rocks

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the official correspondent of the Institute, Dr. ROLANDO GUIDOTTI, Chief of the Agricultural Bureau of Eritrea, transmitted by the Government of the Colony.

§ Communication from the official correspondent of the Institute, Mr. GIORGIO KRUGER, Entomologist of the Government of Libia, Curator of the Libian Natural History Museum, Tripoli.

near Benghazi, were deformed by hypertrophies containing the caterpillars of *Laspeyresia capparidana*, Z. and in a greater quantity the larvae of *Capparimyia savastani*, Mart.

Anarsia lineatella, Z. was found for the first time, during the middle of March, 1936 in early almonds and in the shoots of almond, peach and apricot plants in the Barce plain during all the month of April.

On the morning of 15 May, 1936, a swarm of *Doclostaurus maroccanus*, Thnbg., of unknown origin, invaded the neighbourhood of Cirene and on the same day dispersed between Cirene and Faidia. It should be noted that the appearance of this species already in the adult stage is 15 days in advance of the average date noted in the course of ten years observations.

The meteorological conditions in West Libia (Tripoli and Misurata) during autumn favoured the development of a winter generation of many insects such as *Euchloe belemia*, *Anthocoris charlonia*, *Laphygma exigua*, *Momophila noctuella*, and *Aedes* (= *Stegomyia*) *fasciata*.

Mozambique: Locust Movements *

Contrary to expectation, locust movements in October, 1936, were not so intense as those of the preceding months. The majority of the swarms were scattered and therefore less noticed.

In the north of the Nyassa Province, a more intense movement was reported than during the preceding months.

In the Zambesi Province, the movement was also more intense, and it was the same in the Sul do Save Province.

In the Sulcom district, on the frontier of Zululand, a certain movement was noted, and on 29 October, a swarm originating from Zululand was seen to enter the Colony, which was considered the largest and most compact ever observed at Catuane.

On the whole, the situation was not much better than that in October, 1935.

The greater part of the locusts are already of a yellowish colour, characteristic of the oviposition period. No hoppers have as yet appeared, as, in numerous districts, the hoppers of the elegant grasshopper (*Zonocerus elegans*) were mistaken for those of the red locust (*Nomadacris septemfasciata*).

An important fact from a biological point of view, is the simultaneous appearance this month of the tropical migratory locust (*Locusta migratoria migratorioides*) and *N. septemfasciata*, in the Xinavane district.

The migratory tropical locust was found at Tete in 1932, 1933 and 1934, generally with the red locust, but has never arrived so far towards the South of the Colony as now.

During the month of November, 1936, no information regarding locust movements in the North of the Colony were received.

* Communication from Mr. JÚLIO GARDÉ ALFARO CARDOSO, Chief of the Entomological Section, Lourenço Marques, Mozambique, transmitted to the Institute by the ' Repartição Técnica de Agricultura ' of the Colony.

In the Tete district, the presence of three swarms were observed, one of which layed its eggs in Barué.

In the Quelimane district, three swarms passed through Milango.

In the Sul do Save Province, some small-sized swarms were observed at Inharrime.

In the Marracuene circumscription, a large swarm passed Mahotas, and continued its route towards Dingue and Movene.

The situation is better than last month.

The red locusts are in the oviposition period, but up to date the presence of hoppers has not yet been observed, as larvae of *Z. elegans*, which this year exist in large quantities, continue to be confused for these hoppers.

Southern Rhodesia: Locust Invasion, 1932-1936 *

Monthly Report No. 49. December, 1936.

Winged swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) have been reported from the following districts during the month, namely:— Lomagundi, Darwin, Mtoko, Mrewa, Mazoe, Salisbury, Hartley, Gwelo, Chilimanzi, Victoria, Melsetter, Ndanga, Gwanda, Balalima-Mangwe, Nyamandhlovu, Bula-wayo and Matobo.

No particular trend of direction of flight is indicated by the reports, the four points of the compass being almost equally represented.

No egg-laying had been reported to the end of the month.

Damage to young crops occurred in two districts.

Birds are stated to have been following the swarms in large numbers in several districts. No disease or parasitic outbreak amongst the locusts has been recorded.

Many of the swarms have been of large dimensions and whilst the intensity of the present swarm cycle of this species has diminished in so far as it affects Southern Rhodesia, the possibility of a recrudescence is not to be ignored.

One successful breeding season would lead to a manifold increase in numbers and in the present apparent absence of disease amongst the insects, must be regarded as a distinct possibility during the present year.

Yugoslavia: On the Products Used in the Control of Plant Diseases and Pests †

In Yugoslavia, an official and compulsory control of the chemical composition and true efficacy of products used as fungicides, insecticides, weed killers, etc., must be effected before being employed in practice.

* Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

† Communication from the official correspondent of the Institute, Prof. MICHAÏLO GRADOJEVIĆ, Director of the University Institute of Entomology, Belgrade, Yugoslavia.

The organizations charged with this control are Agricultural Experiment and Control Stations. These are State Institutions; each Station has a special Entomological and Phytopathological Section under the supervision of qualified specialists.

Legislative and administrative measures regulate the manufacture, commerce and sale of these products.

Whosoever, wishes to manufacture, introduce or put into commerce, a insecticidal or fungicidal product, etc. must address a special application to the Ministry of Agriculture, in which he specifies:—

- (a) The name of the product, a detailed description of same, its qualities, etc.;
- (b) The active principle it contains;
- (c) Whether toxic or non-toxic to man and animals;
- (d) Method of use, dosage, etc.

It is also necessary to put at the disposition of the Ministry, a sufficient quantity, in order that chemical analyses and biological examinations can be made both at the laboratory and on the field.

The Ministry sends the product to be examined to at least two Stations, where it is first submitted to a chemical analysis, then to a biological examination at the laboratory and in the field. If good and satisfactory results are obtained (in insecticides, mortality must be over 80 per cent.), the manufacturer or dealer receives a temporary permit for manufacture, import or sale, but the Ministry has the right to cancel this authorization, if the product is found to no longer conform to standard, on inspection made from time to time by the Stations. The Ministry has also the right to confiscate unfit products. If the product, during the course of 3-5 years, was found in practice to be good and efficacious, the Ministry accords a permanent permit.

I have succeeded in finding a special method for the biological examination of larvicides for use in the control of the European Fruit Lecanium (*Eulecanium corni*, Bouché) and other scale insects which secrete the honey-dew. As I have described in detail in two successive publications issued in 1930 and 1933, this method, scientific and practical at the same time, is founded on the fact, known in the biology of the larvae of scale insects, of the secretion of honey-dew by fixed larvae. It is known that, during the summer, the larvae are attached to the lower side of the leaves of the plum trees; and in spring, on the branches, secreting during this period, a sticky liquid, transparent and slightly sweet; this is called the honey-dew. In this method, the mortality of the larvae, after the treatment, serves as a criterium in judging the efficaciousness or non-efficacy of the larvicides and their different degrees of concentration. The criterium which distinguishes the living larvae from the larvae killed by the larvicide, is the secretion or the non-secretion of the honey-dew by the larvae treated.

It must be understood that in order to make the biological examination by this method, the larvae should be attached to the lower side of the leaves or on the branches, as it is only living and attached larvae which secrete the honey-dew.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — In consequence of the dispositions dated 2 September, 1936 [see this *Bulletin*, 1937, No. 1, p. 3], a Ministerial Circular of 25 November, 1936, determines the charges for the certificates to be issued by the Public Health authorities, relative to the use of preparations giving off phosphuretted hydrogen for the control of the corn weevil [*Calandra granaria*]. (*Ämtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 2).

*** A Circular of 15 January, 1937, aims at the intensification of the control of rats and mice, according to the instructions of the Circular of 6 August, 1936 [see this *Bulletin*, 1936, No. 10, p. 221]. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Februar 1937, 17. Jahrg., Nr. 2, S. 19).

Germany (Anhalt). — A Police Ordinance of 5 December, 1936, renders compulsory the destruction of rats at the expense of the persons interested. (*Ämtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 6-7).

Germany (Hamburg). — A second amendment, [dated 7 January, 1937, to the Police Ordinance of 15 March, 1930 [see this *Bulletin*, 1930, No. 10, pp. 150-151, and 1935, No. 6, p. 133], relating to the control of wart disease of potatoes [*Synchytrium endobioticum*], establishes that in small gardens and kitchen gardens only potatoes, whose complete resistance to this disease has been recognized by the 'Reichsnährstand', may be planted. (*Ämtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 7).

Germany (Mecklenburg). — In order to prevent the appearance of potato diseases and pests, a Decree dated 26 November, 1936, disposes that potatoes and tomatoes can only be replanted in the same land every three years at the most. In fields of a total surface area of less than 2,500 m², only potatoes resistant to wart disease [*Synchytrium endobioticum*] may be planted. The only resistant varieties recognized, are those certified as such by the 'Biologische Reichsanstalt für Land- und Forstwirtschaft'. (*Ämtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 8).

Germany (Prussia). — A Decree of 28 October, 1936, relative to the control of grape phylloxera [*Phylloxera vastatrix*] on the Luxemburg frontier, based on the Law of 13 November, 1935 [see this *Bulletin*, 1936, No. 1, pp. 7-8], requires that persons of any nationality working either in the vineyards of Sarreburg and Trier-Land, or Luxemburg, may only cross the frontier at certain points where they must submit their clothes and footgear for disinfection at special stations established for this purpose in German territory.

The same Decree only permits the importation of implements for wine growing across the Luxemburg frontier after their disinfection. The importation of manure and compost is not authorized except by special permission. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 8-10).

** By Ordinance of 4 November, 1936, the control of brown rot of cherries [*Sclerotinia cinerea*] has been rendered compulsory in certain circumscriptions of the Magdeburg district, Saxony Province. The control must be effected according to the instructions given by the Saxe-Anhalt Farmers' Union. All infected parts of the trees must cut off at 30 cm. beyond the part attacked. In badly infested trees, all the branches must be removed if necessary and the tree cut down. All the cut wood must be burnt as soon as possible. (*Ibid.*, S. 10-11).

Germany (Saxony). — A Decree of 21 December, 1936, renders compulsory, in certain communes of Saxony, the control of the beet leaf bug [*Piesma quadrata*]. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Februar 1937, Bd. IX, Nr. 1, S. 11-13).

Argentine Republic. — By Decree No. 94.018 of 8 November, 1936, the installation of a disinfection chamber at the port of Bahía Blanca has been authorized. (*Boletín Oficial de la República Argentina*, Buenos Aires, 15 de diciembre de 1936, año XLIV, núm. 12.734, pág. 540).

** By Decree No. 94.736 of 21 November, 1936, the directors or officials in charge of provincial nurseries, duly authorized, according to the dispositions in force or those which will be subsequently taken on this subject, shall issue in the jurisdiction of each province, sanitary permits of free transit for American vines, their hybrids and shoots, and for plants of *Vitis vinifera*. (*Ibid.*, 14 de diciembre de 1936, núm. 12.733, pág. 488).

** Resolution No. 850 of 15 December, 1936, regulates the Decree No. 96.066 of 14 December, 1936, which restricts the export of fresh fruits. (*Ibid.*, 31 de diciembre de 1936, núm. 12.747, págs. 1393 y 1394).

Belgian Congo. — By a Public Notice, the Governor General notifies that the Laboratory of Phytopathology and Entomology, established temporarily at Eala, Coquilhatville will answer, as far as possible, all requests for information addressed to it on the subject of parasitic diseases and insects harmful to cultivated crops. (*Bulletin administratif du Congo belge*, Léopoldville-Kalina, 10 août 1936, 25^{me} année, n° 15, p. 333).

France. — A Ministerial Decree of 4 January, 1937, distributes among the six agricultural regions of the country, the importers and exporters of plant products, registered for 1937 on the control lists of the Service of Plant Protection and Phytopathological Inspection, and also the staff pertaining to the said Service

and charged with the phytosanitary control of imports and exports. (*Journal officiel de la République française*, Paris, 7 février 1937, LXIX^e année, n° 32, p. 1612-1613).

Italy. — The Ministry of Agriculture and Forests has published a list of the communes of the Kingdom which are declared infested with grape phylloxera [*Phylloxera vastatrix*] or suspected of being so infected, up to the end of December, 1936. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 16 gennaio 1937, anno IX, n. 2, pp. 118-136).

*** By Ministerial Decree of 31 January, 1937, the members of the divisions of the provincial Hunters' Association of Terni, are authorized to hunt migratory game in a determined zone of the Terni province, so as to prevent the damage caused by this game to the olive groves of the said zone. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 6 febbraio 1937, anno 78^o, n. 30, p. 464).

*** The territories of the communes of Bagnasco, Bagnolo Piemonte, Baldissero d'Alba, Barge, Bastia, Mondovi, Benevello, Bernezzo, Bonvicino, Bra, Bossolasco, Boves, Buglio, Briaglia, Castelnovo Ceva, Castiglione Tinella, Ceresole d'Alba, Ceva, Clavesana, Corneliano d'Alba, Cortemilia, Costigliole Saluzzo, Cravanzana, Cuneo, Dronero, Envie, Frissoglio, Fossano, Gorzegno, Igliano, Levice, Martiniana Po, Monteu Roero, Narzole, Niella Tanaro, Nucetto, Paroldo, Pianfei, Piasco, Pézzolo, Priero, Revello, Rifreddo, Roasto, Roccabaldi Crava, Roddi, Rodetto, Rossana, Salmour, Serravalle Langhe, S. Michele Mondovi, Scagnello, Tenda, Venasca, Verduno, Villanova Mondovi, of the province of Cuneo, have been declared infested with grape phylloxera [*Phylloxera vastatrix*]. (*Ibid.*, 9 febbraio 1937, n. 32, p. 500).

*** The territories of the communes of Agliè, Albiano, Alice Superiore, Andrate, Azeglio, Bard, Ballengo, Borgomasino, Caluso, Candia Canavese, Carema, Cascinette, Castellamonte, Chiaverano, Cuornè, Donnaz, Fiorano Canavese, Issoglie, Lessolo, Lugnacco, Masino, Monte Giove, Nus, Palazzo Piverone, Pedanea, Ponte San Martino, Quarto Praetoria, San Giorgio Canavese, Settimo Tavagnasco, Valdigna d'Aosta, Valperga, Vestignè, Vidracco, Villanova Baltea, of the province of Aosta, have been declared infested with grape phylloxera. (*Ibid.*).

Libia. — By Decree of the Governor General, No. 25748 of 23 December, 1936, a Commission has been appointed for the purpose of examining the statements relating to the destruction of animals harmful to agriculture and to the fauna of Libia. (*Bollettino Ufficiale del Governo della Libia*, Tripoli, 1^o gennaio 1937, anno XXIV, n. 1, p. 8).

Peru. — The Supreme Decree dated 22 June, 1936, establishes the following:—

(1) The eradication of the fruit fly [*Anastrepha* sp.], in the Tacna province must be effected in accordance with the programme which will be presented by the 'Dirección' of Agriculture, Cattle Breeding and Colonization.

(2) It is declared compulsory for proprietors or holders of country or urban farms to carry out the regulations ordered by the Government, in order to exterminate the said pest.

(3) The expenses required for the present campaign of 'Sanidad Vegetal' will be covered by the State, and will be charged to the special account denominated 'Campaign for the extermination of the fruit fly in Tacna', which will be opened by the Ministry of the Treasury. (*El Peruano*, Diario Oficial, Lima, 25 de noviembre de 1936, año 96, tomo II, trimestre IV, no. 265, pág. 1109).

* * By Resolution of 22 June, 1936, the campaign for the control of the fruit fly [*Anastrepha* sp.] in the Tacna Province comprises: the destruction of cultivated and wild fruits during the entire period of the campaign; prohibition of the cultivation of vegetables and garden plants specified in the relative Regulation, as well as complete destruction of the fruit trees mentioned in the said Regulation; pruning of cultivated trees when considered necessary; establishment of traps and spraying of certain fruit trees and wild plants; digging up of the ground under the trees, and also round about wild plants which might act as hosts for the fruit fly, in order to keep the land free of weeds. The introduction into the Tacna province during the campaign, of fruits and vegetables which might be vectors of the fly, is absolutely forbidden, except in certain cases as provided for in the Regulation.

The indemnification which will be necessary as a result of the aforesaid campaign will be paid by the State in conformation with the valuation made by a Committee composed of the Prefect of the Tacna province as President, the Chief of the Agricultural Station of the district, and a Delegate nominated by the Chamber of Commerce of Tacna. (*Ibid.*, 26 de noviembre de 1936, no. 266, pag. 1114).

* * By Resolution of 24 June, 1936, the Regulation of the Supreme Resolution No. 137 of 22 June, 1936, dealing with the measures for the cultivation of cotton in the Nepeña Valley, is approved [see this *Bulletin*, 1937, No. 1, p. 8]. (*Ibid.*, 28 de noviembre de 1936, no. 267, pág. 1117).

RECENT BIBLIOGRAPHY

- AAMODT, O. S., and PLATT, A. W. Varietal testing for the reaction of oats to diseases, especially covered smut. *Canadian Journal of Research*, Ottawa, 1936, Vol. 14, Sec. C, No. 12, pp. 425-437. References, pp. 436-437. [*Ustilago levis*, *Pseudomonas coronafaciens*, and blast (cause unknown)].
- ADAM, D. B., and COLQUHOUN, T. T. The spread of take-all through the soil. *The Journal of the Australian Institute of Agricultural Science*, Sydney, 1936, Vol. 2, No. 4, pp. 172-174. [*Ophiobolus graminis*].
- ALCOCK, N. L., and HOWELLS, Dudley V. The Phytophthora disease of strawberry. *Scientific Horticulture*, Wye, Kent, 1936, Vol. IV, pp. 52-58. References, p. 58. [*Phytophthora* sp.].

- ANDERSON, Dean C., and BROWN, Hubert M. Studies on Hessian fly infestation and some characters of the wheat culm. *Journal of the American Society of Agronomy*, Geneva, New York, 1936, Vol. 28, No. 6, pp. 479-483, figs. 1. Literature cited, p. 483.
[*Phytophaga destructor*].
- ANDREWARTHA, H. Vevers. Thrips investigation. 8. The influence of temperature on the rate of development of the immature stages of *Thrips imaginis* Bagnall and *Haplothrips victoriensis* Bagnall. *Journal of the Council for Scientific and Industrial Research*, Melbourne, 1936, Vol. 9, No. 1, pp. 57-64, figs. 1-3. References, p. 64.
- ARK, P. A., and THOMAS, H. Earl. Anguillulina pratensis in relation to root injury of apple and other fruit trees. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 12, pp. 1128-1134, figs. 1-4. Literature cited, p. 1134.
- ARK, P. A., and TOMPKINS, C. M. Bacteriosis of pumpkin fruits in California. *Science*, Lancaster, Pa., 1936, New Series, Vol. 84, No. 2166, p. 18.
[The pathogen secured from fruits of *Cucurbita pepo* var. *condensa* was identified as belonging to the genus *Erwinia*].
- ARNAUD, G[abriel]. Action de divers métaux sur le mildiou de la vigne. *Comptes rendus hebdomadaires des séances de l'Académie d'Agriculture de France*, Paris, 1937, tome XXIII, n° 2, p. 65-67.
[Besides the Bordeaux mixture, other mixtures containing sulphates of cobalt, nickel, and silver were tried against *Plasmopara viticola*].
- ATKINSON, J. D. The control of corky-pit of apples in New Zealand. *The New Zealand Journal of Science and Technology*, Wellington, N. Z., 1936, Vol. XVIII, No. 4, pp. 381-390, figs. 1-5. Literature cited, p. 387.
[The results obtained from the use of boron suggest that corky-pit may be nutritional in origin].
- AUSTIN, W. W., and ROBERTSON, D. W. Inheritance of resistance to *Ustilago levis* (K. & S.) Magn. (covered smut) in a cross between Markton and Colorado 37 oats. *Journal of the American Society of Agronomy*, Geneva, New York, 1936, Vol. 28, No. 6, pp. 467-471. Literature cited, p. 471.
- BALCH, R. E. The European spruce sawfly outbreak in 1935. *The Canadian Entomologist*, Orillia, 1936, Vol. LXVIII, No. 2, pp. 23-31.
[*Diprion polytomum*].
- BARTHOLOMEW, E. T. Endoxerosis of lemon fruits as affected by the application of different amounts of irrigation water. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 12, pp. 1149-1154. Literature cited, pp. 1154-1155.
[Endoxerosis (internal decline) is an internal, non-pathogenic disorder].
- BARVSHNIKOV, P. Mechanization of the ground-squirrel control. *Bulletin of Plant Protection*, Series III: Control measures and implements, Leningrad, 1936, No. 8, pp. 133-137, fig. 1.
[In Russian, with title also in English].
- BATES, G. H., and DILLON WESTON, W. A. R. The dying of the tips of potato sprouts during "chitting". *Scientific Horticulture*, Wye, Kent, 1936, Vol. IV, pp. 141-142.
- BEBBINGTON, A. G., and ALLAN, W. The food-cycle of *Dysdercus fasciatus* in Acacia savannah in Northern Rhodesia. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 2, pp. 237-249, figs. 1-10. References, p. 249.

- BELIAEV, J., and KHARCHENKO, V. Characters of cereals indicating their resistance against infestation by *Oscinosoma frit* L. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 50-60, figs. 1-5.
[In Russian, with title and summary in English].
- BERKELEY, G. H. A strain of the virus which causes streak in tomato. *Canadian Journal of Research*, Ottawa, 1936, Vol. 14, Sec. C, No. 12, pp. 419-424, pls. I-III. References, p. 424.
- BERRIE, George. The rabbit in Australia: some suggested methods of destruction. *The Journal of the Ministry of Agriculture*, London, 1937, Vol. XLIII, No. 10, pp. 932-936, figs. 1-2.
- BLATTNÝ, Ctibor. Ueber ein geeignetes Adhäsivum zu flüssigen Pflanzenschutzmitteln. *Das Weinland*, Wien 1937, IX. Jahrg., Nr. 1, S. 20-21.
- BORDIER Henri. Étude expérimentale des effets toxiques du chlorate du soude sur les cellules végétales. *Revue Scientifique*, Paris, 1936, 74^e année, n° 13, p. 385-389, fig. 1-3.
- BRANAS, Jean, et BERNON, Georges. Recherches sur le traitement de la panachure. *Revue de Viticulture*, Paris, 1936, 43^e année, tome LXXXV, n° 2193, p. 26-27.
[This disorder is a partial yellowing of the vine leaves which makes its appearance in the absence of any harmful action of lime in the soil].
- BRANDT, Herbert. Zur Prognose der als Puppe überwinternen forstlichen Grossschmetterlinge. *Forstarchiv*, Hannover 1936, 12. Jahrg., Heft 21, S. 358-360, Abb. 1-2.
[*Panolis flammea*, *Bupalus piniarius*, *Sphinx pinastri*].
- BREMER, H. Zur Epidemiologie und Bekämpfung des Spargelrostes. *Die Gartenbauwissenschaft*, Berlin 1936, 10. Bd., 1. Heft, S. 51-73, Abb. 1-5. Literaturverzeichnis, S. 72-73.
[*Puccinia asparagi*].
- BRIEN, R. M., and CHAMBERLAIN, E. E. Tomato-seedling damping-off. I. Control by soil-treatment. *The New Zealand Journal of Agriculture*, Wellington, 1936, Vol. 52, No. 5, pp. 257-267, figs. 1-5.
[*Pythium ultimum* and *Corticium vagum*].
- BROADFOOT, W. C. Experiments on the chemical control of snow-mould of turf in Alberta. *Scientific Agriculture*, Ottawa, Canada, 1936, Vol. XVI, No. 11, pp. 614-618. Reference, p. 618.
[With title and summary also in French:— «Expériences sur le traitement chimique de la moisissure des neiges du gazon dans l'Alberta»: — *Fusarium* sp., *Rhizoctonia* sp. and a member of Basidiomycetes not identified on *Festuca rubra* var. *fallax*].
- BUCKARDT, H. L. Effectiveness of furfural petroleum combinations in eradicating certain noxious weeds. *Journal of the American Society of Agronomy*, Geneva, New York, 1936, Vol. 28, No. 6, pp. 437-442, fig. 1. Literature cited, p. 442.
[*Taraxacum officinale*, *Plantago major*, *P. lanceolata*, *Agropyron repens*, *Convolvulus arvensis*].
- BUCKHURST, A. S. The asparagus fly. *The Journal of the Ministry of Agriculture*, London, 1937, Vol. XLIII, No. 10, pp. 941-943, figs. 1-5.
[*Platyparea poeciloptera*].
- BUNTING, B., and MARSH, T. D. Effect of sodium chlorate used as a weed-killer among oil palms. *The Malayan Agricultural Journal*, Kuala Lumpur, 1936, Vol. XXIV, No. 1, pp. 22-25.

- CANDIOLI, Primo. Il mal del piombo nel pesco si può prevenire o, perlomeno, si può ridurre la percentuale di piante colpite? *Note di Frutticoltura*, Pistoia, 1937, anno XV, n. 2, pp. 29-31.
[According to the A. the disease cannot be attributed to the action of *Stereum*].
- CÁRCANO, Miguel Angel. Defensa contra la langosta. *El Campo*, Buenos Aires, 1936, año XX, n.º 240, págs. 673 y 674, 2 figs.
[*Schistocerca paranensis*].
- CARLE, G., et GATTEFOSSÉ, J. Un parasite du ver rose en arrête l'offensive au Maroc. *Bulletin trimestriel de l'Association Cotonnaire Coloniale*, Paris, 1936, 34^e année, nouv. sér., n.º 23, p. 78-79, 1 fig.
[*Pimpla roburator*, a parasite of *Pectinophora* (*Platyedra*) *gossypiella*].
- CHINA, W. E. A new species of *Cicadulina*, China (Homoptera, Jassidae) injurious to maize in Tanganyika Territory. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 2, pp. 251-252, fig. 1.
[*C. storeyi*. Technical description in English].
- CHRISTENSEN, J. J. Associations of micro-organisms in relation to seedling injury arising from infected seed. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 12, pp. 1091-1105, fig. 1. Literature cited, pp. 1104-1105.
- CLINCH, Phyllis E. M., LOUGHNANE, J. B., and MURPHY, Paul A. A study of the aucuba or yellow mosaics of the potato. *The Scientific Proceedings of the Royal Dublin Society*, Dublin, 1936, Vol. 21, N. S., Nos. 35-41, pp. 431-448, pls. 10-12. References, p. 448.
- COOK, Melville T. Root diseases of sugar cane in Puerto Rico. *The Journal of Agriculture of the University of Puerto Rico*, Río Piedras, P. R., 1935, Vol. XIX, No. 2, pp. 121-128, pls. IX-XVI. Literature, p. 127.
[*Inter alia*, a Latin diagnosis of *Olpidium sacchari* n. sp. is given].
- COSTANTIN, J. Les recherches sur le blé et les rouilles dans l'Amérique du Nord. *Annales des Sciences Naturelles, Botanique*, Paris, 1936, 10^e série, tome XVIII, fasc. 2, p. I-XXXVI, fig. 1-7.
[In appendix:— 'Publications du Laboratoire de Winnipeg (reçues pendant l'impression)'. — *Puccinia* spp.].
- CROSS, D. O. "Tumbling mustard" — A weed worth watching. *The Agricultural Gazette of New South Wales*, Sydney, 1936, Vol. XLVII, Pt. 2, p. 98.
[*Sisymbrium altissimum*].
- CUMMINS, J. E., and WILSON, H. B. The preservation of timber against the attacks of the powder post borer (*Lyctus brunneus* Stephens) by impregnation with various chemicals. *Journal of the Council for Scientific and Industrial Research*, Melbourne, 1936, Vol. 9, No. 1, pp. 37-56, figs. 1-2. References, p. 48.
- DAVYDOV, P. Grain smut treaters. *Bulletin of Plant Protection*, Series III: Control measures and implements, Leningrad, 1936, No. 8, pp. 97-122, figs. 1-16.
[Literature cited], p. 122.
[In Russian, with title also in English].
- DE CASTELLA, F. Phylloxera-resistant vine stocks (IV.): Including some recent introductions. *The Journal of the Department of Agriculture, Victoria, Australia*, Melbourne, 1936, Vol. XXXIV, Pt. 2, pp. 89-97, 11 figs.
[See this *Bulletin*, 1936, No. 1. p. 15].
- DE CASTELLA, F. Phylloxera-resistant vine stocks (V.): Considerations governing the choice of a stock. *The Journal of the Department of Agriculture, Victoria, Australia*, Melbourne, 1936, Vol. XXXIV, Pt. 6, pp. 303-309, 3 figs.

- DIETEL, P. Über die Variabilität der Grösse der Teleutosporen der Uromyces-Arten auf *Euphorbia Cyparissias*. *Annales Mycologici*, Berlin 1936, Vol. XXXIV, No. 1/2, S. 53-56.
- ECKSTEIN, Karl. Zoologische Beobachtungen. 1. Aus dem Leben des grossen braunen Rüsselkäfers, *Hylobius abietis* L. *Forstwissenschaftliches Centralblatt*, Berlin 1936, 58. Jahrg., Heft 24, S. 824-832, Abb. 1-8.
- EDWARDS, W. H. Pests attacking citrus in Jamaica. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 2, pp. 335-337.
- ETCHEGARAY, Pedro. Contra la langosta. *El Campo*, Buenos Aires, 1936, año XX, n° 240, págs. 690 a 692.
[*Schistocerca paranensis*].
- EVANS, J. W. A new species of *Nysius* (Hem. Lygaeidae) from Tasmania, and notes on the economic importance of the genus. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 4, pp. 673-676, fig. 1. References, pp. 675-676. [*N. turneri* n. sp.].
- EVANS, J. W. The overwintering of the larvae of *Tortrix postvittana* Walk. in apple orchards. *The Journal of the Department of Agricultural Science*, Sydney, 1936, Vol. 2, No. 4, pp. 169-170.
- FERNÁNDEZ, F. J. Caza y destrucción de la voladora. Primera etapa de la campaña. Biología y matemática de la langosta. *El Campo*, Buenos Aires, 1936, año XX, n° 240, págs. 674 y 675, 1 fig.
[*Schistocerca paranensis*].
- FERNÁNDEZ, F. J. La tucura ocasiona perjuicios considerables. La plaga existe en varias zonas del país por la despreocupación de los ganaderos y agricultores. No es espectacular e inmensa como el acridio, pero sí muy dañina. *El Campo*, Buenos Aires, 1936, año XX, n° 240, págs. 689 y 690.
[*Trigonophymus arrogans*].
- FISH, S., and PUGSLEY, A. T. Halo blight of beans. Control by resistant varieties. *The Journal of the Department of Agriculture, Victoria, Australia*, Melbourne, 1936, Vol. XXXIV, Pt. 6, p. 278.
[*Phytophthora medicaginis* var. *phaseolicola*].
- FISCHER, George W. The longevity of smut spores in herbarium specimens. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 12, pp. 1118-1127. Literature cited, p. 1127.
[*Ustilaginaceae* and *Tilletiaceae*].
- FISHER, Ronald C. Insects attacking the timber of English oak. *Forestry*, London, 1936, Vol. X, No. 1, pp. 47-57, pls. X-XII. Literature references, pp. 55-56.
- FLACHS, Karl. Blattläuse an Heil- und Gewürzpflanzen. *Heil- und Gewürz-Pflanzen*, Freising-München 1937, XVII. Bd., Lief. 2/3, S. 119-135. Literatur, S. 135.
[A list of Aphids injurious to *Valeriana officinalis*, *Artemisia vulgaris*, *A. absinthium*, *Symphytum officinale*, *Hyoscyamus niger*, *Anethum graveolens*, *Aconitum napellus*, *Foeniculum capillaceum*, *Digitalis purpurea*, *Sambucus nigra*, *Tussilago farfara*, *Anthemis nobilis*, *Anthriscus cerefolium*, *Levisticum officinale*, *Papaver somniferum*, *Pastinaca sativa*, *Petroselinum sativum*, *Tanacetum vulgare*, *Rheum palmatum*, *Calendula officinalis*, *Achillea millefolium*, *Conium maculatum*, *Datura stramonium*, *Atropa belladonna*].
- FOËX, Etienne]. L'œuvre de Millardet et le cinquantenaire de la bouillie bordelaise. *Revue Horticole*, Paris, 1936, 108^e année, n° 3, p. 89-93, fig. 69-70.

- FOËX, Etienne, et LANSADE, Maurice. Deux maladies de la pomme de terre. *Comptes rendus hebdomadaires des séances de l'Académie d'Agriculture de France*, Paris, 1936, tome XXII, n° 20, p. 726-730.
[*Fusarium oxysporum* and *Bacterium xanthochlorum*].
- FOËX, Etienne, et LANSADE, Maurice. Deux maladies de la pomme de terre. *Annales des Sciences Naturelles, Botanique*, Paris, 1936, 10^e série, tome XVIII, fasc. 2, p. 141-164. fig. 1-12.
[The paper of Messrs Foëx and Lansade is accompanied by 'Remarque au sujet du travail précédent, par J. Constantin'. — See also this *Bulletin*, 1936, No. 7, p. 161. — *Fusarium oxysporum* and *Bacterium xanthochlorum*].
- FRAPPA, Cl[au]de. Deux nouveaux parasites du cotonnier à Madagascar. *Coton et Culture Cotonnière*, Paris, 1936, vol. X, fasc. 3, p. 113-120. Bibliographie, p. 119-120.
[*Cosmophila erosa* and *Achontia graellsii*].
- FRAPPA, Claude. Sur l'emploi des émulsions savonneuses d'huiles végétales contre les pucerons et les chenilles dans nos possessions coloniales. *L'Agronomie Coloniale*, Paris, 1936, 25^e année, n° 227, p. 141-145.
- GABOTTO, L[ui]gi. La campagna peronosporica 1936. *Il Coltivatore e Giornale Vini-colo Italiano*, Casale Monf., 1937, anno 83^o e 63^o, n. 2, pp. 26-31.
[*Plasmopara viticola*].
- GHIMPU, V[ic]tor. Afecțiunile patologice și inaniicii tutunului în România și diferite experiențe în 1936. *Buletinul cultivării și fermentării Tutunului*, București-Băneasa 1936, an. XXV, nr. 4, p. 400-406.
[In Rumanian, with title and summary in French: 'Les affections pathologiques et les ennemis des tabacs en Roumanie pendant l'année 1936'].
- GIORGINI, G. Sulla recente defoliazione dell'olivo. *Sabina Agricola*, Rieti, 1937, anno IX, n. 2, p. [1].
[*Cycloconium oleaginum*].
- GOBEIL, A. R. The biology of *Ips perturbatus* Eichhoff. *Canadian Journal of Research*, Ottawa, 1936, Vol. 14, Sec. D, No. 12, pp. 181-204, figs. 1-4, pl. I. References, p. 204.
- GOESCHELE, E. The biological composition of brown-rust. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 21-27. [Literature cited], pp. 26-27.
[In Russian, with title and summary in English. — *Puccinia triticina*].
- GRANKINA, K. The testing of natrium fluorium against *Psylliodes attenuata* Koch. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 158-159.
[In Russian, with title also in English].
- GREANEY, F. J. Cereal rust losses in Western Canada. *Scientific Agriculture*, Ottawa, Canada, 1936, Vol. XVI, No. 11, pp. 608-614. References, p. 613.
[With title and summary also in French 'Pertes causées par la rouille des céréales dans l'ouest du Canada'. — *Puccinia graminis*].
- GREEN, D. E. Snowdrop mould. *The Gardeners' Chronicle*, London, 1936, Third Series, Vol. XCIX, No. 2563, pp. 93-95, figs. 47-50.
[*Botrytis galanthina*].
- GRIEVE, B. J. Effect of inoculation of plant stems with *Bacterium solanacearum*. *Nature*, London, 1936, Vol. 137, No. 3465, p. 536.
- GROSSMANN, H. Altes und neues von der kleinen Fichtenblattwespe (Nematus abietum Htg.). *Schweizerische Zeitschrift für Forstwesen*, Bern 1936, 87. Jahrg., Nr. 2, S. 33-41, Abb. 1-4.

- GRUSHEVSKY, V. Bath for thermal disinsection of grafts and nursery stock with hot water. *Bulletin of Plant Protection*, Series III: Control measures and implements, Leningrad, 1936, No. 8, pp. 139-146, figs. 1-3. [In Russian, with title also in English].
- HARGREAVES, E. Fruit-piercing Lepidoptera in Sierra Leone. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 4, pp. 589-605, figs. 1-6. References, pp. 604-605. [*Achaea*, *Anua*, *Hypocala*, *Othreis*, *Serrodus*, *Cocytodes*, *Heliophisma*, *Pericyma*, *Sphingomorpha*, *Lacera*, *Lagoptera*, *Pseudotolna*, *Tolna*, *Charaxes* spp., etc.].
- HARLAND, S. C. Some notes on cotton in Colombia. *Tropical Agriculture*, Trinidad, B. W. I., 1936, Vol. XIII, No. 2, pp. 31-34. [Inter alia, the following pests of *Gossypium purpurascens* and *G. barbadense* are reported:—*Dysdercus minimus*, *D. ruficollis*, *Sacadodes pyralis*, *Eriophyes gossypii*, *Alabama argillacea*, etc.].
- HILTZER, Alfred. Vliv strupovitosti na transpiraci jablek. — L'influence du *Fusicladium* sur la transpiration des pommes. *Sborník Československé Akademie Zemědělské*, Praha 1935, roč. X, seš. 5, str. 616-621, 1 diagr. Literatura, str. 620. [*Fusicladium dendriticum*].
- HILL, A. V. Cercospora leaf-spot (frog-eye) of tobacco in Queensland. *Commonwealth of Australia. Council for Scientific and Industrial Research. Bulletin* No. 98, Melbourne, 1936, 46 pp., 6 charts, 7 pls. Literature cited, pp. 45-46. [*Cercospora nicotianæ*].
- HILT, A. V., and ANGELL, H. R. Downy mildew (blue mould) of tobacco: prevention of its development in inoculated and infected seedlings by benzol. *Journal of the Council for Scientific and Industrial Research*, Melbourne, 1936, Vol. 9, No. 4, pp. 249-254. [*Peronospora tabacina*].
- HOLZ, W. Beobachtungen über Primärinfektionen durch Askosporen des Apfelschorf-erregers [*Fusicladium dendriticum* (Wallr.) Fckl.]. *Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, II. Abt., Jena 1936, 93. Bd., Nr. 13/17, S. 290-295, Abb. 1-2. Literatur-Verzeichnis, S. 295.
- HORNIG, Gerhard. Vergleichende Untersuchung verschiedener Methoden zur Bestimmungen des Abbaugrades bei Pflanzkartoffeln. *Pflanzenbau*, Leipzig 1936, 13. Jahrg., Heft 6, S. 209-234. Literaturnachweis, S. 233-234.
- HUTSON, J. C. The coffee berry-borer in Ceylon (*Stephanoderes hampei* Ferr.). *The Tropical Agriculturist*, Peradeniya, 1936, Vol. LXXXVII, No. 6, pp. 378-383, 1 pl.
- JANNONE, Giuseppe. Si può sperare su una pratica applicazione dei microbi sporigeni per la lotta contro gl'insetti? *L'Ortofrutticoltura Italiana*, Roma, 1937, anno VI, n. 1, pp. 4-6.
- JATZENKO, I. Dusters. *Bulletin of Plant Protection*, Series III: Control measures and implements, Leningrad, 1936, No. 8, pp. 33-76, figs. 1-12. [Literature cited], pp. 75-76. [In Russian, with title also in English].
- JOOSTEN, J. H. L. De stand van het boordervraagstuk in Krawang. *Landbouw, Buitenzorg* 1936, XI jaarg., no 11, blz. 484-502, fig. 1-4. [In Dutch, with title and summary in English: — 'The problem of the rice-borer in Krawang'. — *Scirpophaga innotata*].

- KHARIN, S. A modification of the engine sprayer "Pioneer" for the control of mites on weeds, and of alfalfa and cabbage pests. *Bulletin of Plant Protection*, Series III: Control measures and implements, Leningrad, 1936, No. 8, pp. 25-31.
[In Russian,* with title also in English].
- KÖCK, Gustav. Der Kampf gegen Pilzkrankheiten im Forst. *Wiener Allgemeine Forst- und Jagd-Zeitung*, Wien 1936, 54. Jahrg., Nr. 1, S. 2-3. -
- KOSTOFF, Dontcho. Inheritance of natural immunity in plants with special reference to production of immune varieties by interspecific hybridisation. — Dědičnost přirozené imunity u rostlin se zvláštním zřetelem k produkci imunních variet mezi druhovým křížením. *Sborník Československé Akademie Zemědělské*, Praha 1935, roč. X, seš. 4, str. 389-402, figs. 1-7. Literature, str. 402.
- KOTTHOFF, P. Neue Topfpflanzenkrankheiten. *Die kranke Pflanze*, Dresden 1937, 14. Jahrg., Heft 2, S. 28-30, Abb. 1-2.
[Leaf spot of *Sansevieria zeylanica* caused by *Fusarium moniliforme*; stern rot of *Kalanchoë globulifera* var. *coccinea* due to *Phytophthora cactorum*].
- KROESEN, J. C. T. Irrigatie-ervaringen op het gebied van de witte rijstboorderbestrijding in West-Brebes. *Landbouw*, Buitenzorg 1936, XI jaarg., no 11, blz. 503-509.
[In Dutch, with title and summary in English:— 'Experiences concerning irrigation in connection with control of the white rice-borer in West-Brades (residency Pekalongan, Java)'. — *Scirpophaga innotata*].
- KUULMAN, L. W. Symptomen van de mentek-ziekte van de rijstplant. *Landbouw*, Buitenzorg 1936, XI jaarg., no 5, blz. 225-245, fig. 1-4. Literatuur, blz. 242-243.
[In Dutch, with title and summary in English.— A physiological disease of the rice plant].
- LAFFOND, Pierre. Les principaux ennemis du vignoble algérien en 1935. *Le Progrès Agricole et Viticole*, Montpellier, 1936, 53^e année, n° 3, p. 63-67.
[*Plasmopara viticola*, *Uncinula necator*, 'court-noué', *Rosellinia necatrix*, *Armillariella mellea*, 'rougeot', *Polychrosis botrana*, *Pseudococcus vitis*, *Eulecanium corni*, *Oenophthira pilleriana*, *Haltica ampelophaga*].
- LASINIO, Ettina, II. "Fire Blight" o malattia del fuoco. *Note di Frutticoltura*, Pistoia, 1937, anno XV, n. 2, pp. 21-28, figg. 3-4.
[*Bacillus amylovorus*].
- LAUBERT, R. Eine neue Begonienkrankheit. *Die kranke Pflanze*, Dresden 1936, 13. Jahrg., Heft Nr. 2, S. 31.
[*Oidium* sp.].
- LAVANCHY, G. Un essai intéressant de lutte contro le gel. *La Terre Vaudoise*, Lausanne, 1937, XXIX^e année, n° 2, p. 8-9, fig. 1-5.
- LOPATIN, M. The mould burn on apple tree caused by *Sclerotinia fructigena* Schröt. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 103-107.
[In Russian, with title and summary in English].
- LUCHETTI, Giovanni. Teoria e pratica della clorosi alcalina. *L'Italia Agricola*, Roma, 1937, anno 74, n. 1, pp. 33-38, 6 figg.
- MACHACEK, J. E., and GREANEY, F. J. Studies on the control of root-rot diseases of cereals. IV. Influence of mechanical seed injury on infection by *Fusarium culmorum* in wheat. *Canadian Journal of Research*, Ottawa, 1936, Vol. 14, Sec. C, No. 12, pp. 438-444. References, p. 444.

- MAGEE, C. J. Spotted wilt disease of lettuce and potatoes. *The Agricultural Gazette of New South Wales*, Sydney, 1936, Vol. XLVII, Pt. 2, pp. 99-100, 118, figs. 1-4.
[A virus disease].
- MAMELI CALVINO, EVA. *Septoria exotica*, specie nuova per l'Italia. *La Costa Azzurra Agricola Floreale*, Sanremo, 1937, anno XVII, n. 1, pp. 4-5.
[On *Veronica kulkeana* at San Remo, Italy].
- MAMELI CALVINO, EVA. Rassegna del materiale fitopatologico esaminato nel 1936. *La Costa Azzurra Agricola Floreale*, Sanremo, 1937, anno XVII, n. 1, pp. 6-9.
[Results of an examination of material sent to the Experiment Station of Flower Cultivation at San Remo].
- MARSHALL, Guy A. K. Curculionidae (Col.) attacking cultivated plants. *Bulletin of Entomological Research*, London, 1936, Vol. 27, Pt. 2, pp. 253-259, figs. 1-2.
[*Protostrophus armatipes* n. sp. harmful to wheat (Orange Free State); *Prot. sorghi* n. sp. harmful to *Sorghum* (Transvaal); *Prot. cerealis* n. sp. harmful to wheat (Orange Free State); *Apion corchori* n. sp. harmful to *Corchorus* (South India); *A. (Piezotrachelus) ugandum* harmful to *Voandzeia subterranea* (Tanganyika Territory); *Alcides obsoletus* harmful to *Crotalaria juncea* (Kenya); *Colobodes dolichotis* n. sp. harmful to *Dolichos lablab* (South India); *Baris amaranthi* n. sp. and *B. dodonis* n. sp. harmful to *Amaranthus polygamus* (Uganda)].
- MATTHAMS, J. Rabbit destruction. Poisoning, digging out, and fumigating. *The Journal of the Department of Agriculture, Victoria, Australia*, Melbourne, 1936, Vol. XXXIV, Pt. 2, pp. 85-87, 1 fig.
- MATZULEVITCH, B. Differentiation of viruses by the serological method. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 37-49. [Literature cited], pp. 48-49.
[In Russian, with title and summary in English].
- MATZULEVITCH, B. The determination of virus diseases of potatoes with serological methods. *Plant Protection*, Leningrad, 1936, fasc. 10, pp. 151-153.
[In Russian, with title also in English].
- MCDONALD, W. J. B. Tobacco investigations in Victoria. Results of 1935 tests. *The Journal of the Department of Agriculture, Victoria, Australia*, Melbourne, 1936, Vol. XXXIV, Pt. 5, pp. 217-225, figs. 1-5.
[Also contains:—
'A note on stem grub infection (*Phthorimaea heliopa*)'].]

NOTES

Official Correspondents. — Dr. R. M. NATTRAS, D. I. C., Plant Pathologist to the Department of Agriculture, Nicosia, Cyprus, has been nominated official correspondent of the International Institute of Agriculture, for questions relating to Plant Pathology in the said Colony.

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